April 2, 1957 J. T. WHITE 2,787,026

CLEARER ROLL

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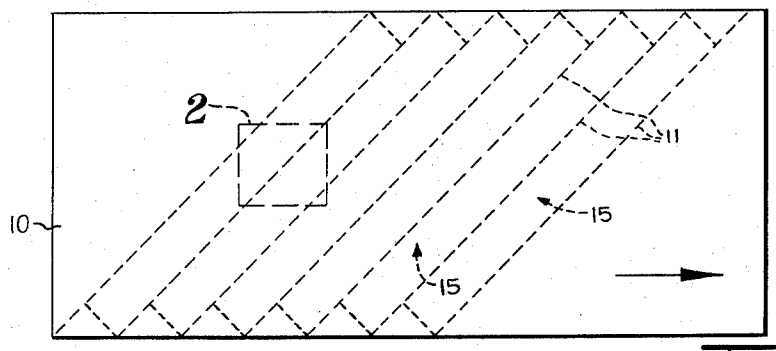

Fig-1

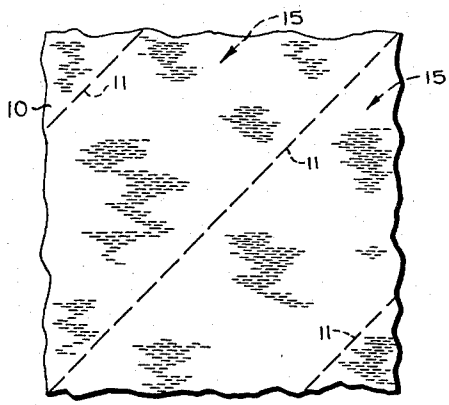

Fig-2

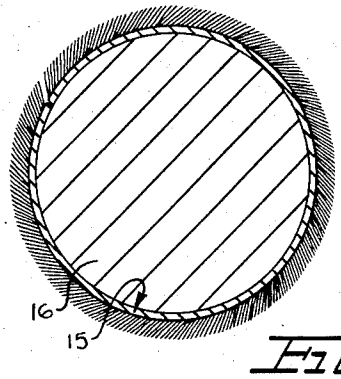

Fig-4

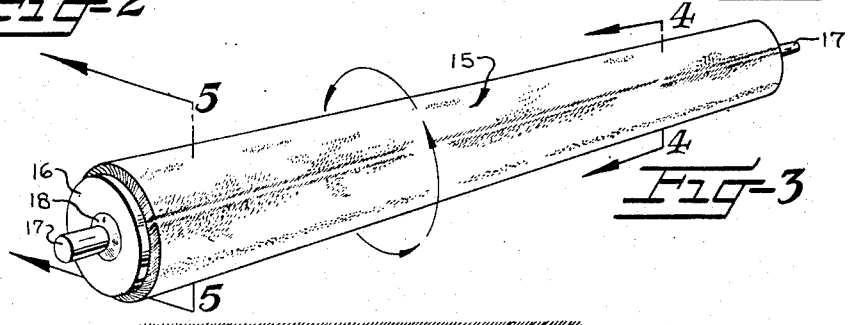

Fig-3

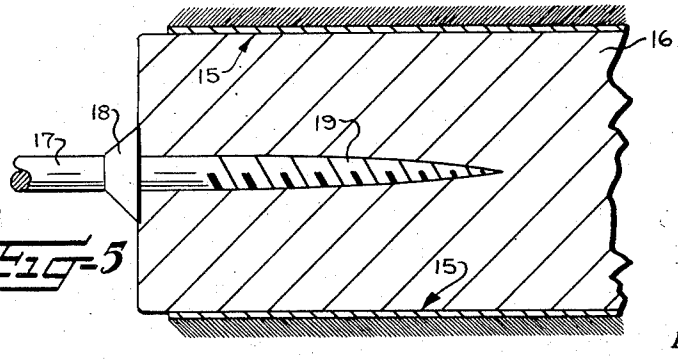

Fig-5

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CLEARER ROLL

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1 Claim. (Cl. 19—140)

This invention relates to textile fabric covered clearer rolls or scavenger rolls and more especially to clearer rolls such as are employed in spinning and roving frames and which also may be used with the upper fluted front roll of a pair of conventional drawing rolls. The clearer roll picks up broken threads, lint and fly from the drawing rolls to thereby prevent accumulation of this lint on the fluted roll.

Heretofore, other types of textile covered clearer rolls have been used which do a satisfactory job of keeping the fluted upper roll clear of lint, fly and the like but because of the character of the textile fabric covering used on the clearer rolls it has been very difficult to remove the accumulation of lint from the clearer roll when it has built up a sufficient amount to decrease the efficiency of the clearer roll.

It is therefore, an important object of this invention to provide a textile covering for a clearer or scavenger roll which is cut from a single piece of material extending from one end of the roll to the other, and which covering consists of velvet, plush or velour or similar pile fabric.

It is another object of this invention to provide a clearer roll cover for textile machines which has a one piece textile cover secured therearound and which cover consists of velvet or velour or similar pile fabric whose pile has been set so that the pile or nap of the fabric lays in an inclined position relative to the fell of the cloth.

It is another object of the present invention to provide a clearer roll with end trunnions of a smooth wear-resistant material serving as journals on which the clearer rolls may rotate in stationary bearings.

It is another object of this invention to provide a clearer roll textile covering which has a pile thereon and which textile covering is placed on said clearer roll in such a manner that the lay to the pile or nap of the fabric is inclined at approximately a forty-five degree angle to the longitudinal axis of the clearer roll and is also inclined at a forty-five degree angle relative to the radial diameter of the clearer roll to thus provide a textile covering for said clearer rolls which will be efficient in picking up lint and fly from the adjacent cooperating drawing roll and which pile of the said textile fabric may be easily collapsed to remove the accumulated lint and fly therefrom when it is desired to clean the clearer roll by stripping the same by hand in the same direction as the lay of the pile of the fabric.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawings in which—

Figure 1 is a plan view of a piece of the velour or velvet pile fabric from which the textile covering for the clearer roll is cut and showing the manner in which the strips used to cover the clearer rolls are cut on a bias of the cloth;

Figure 2 is an enlarged fragmentary elevation of the

section indicated by the rectangle 2 in Figure 1 and showing the direction of the lay of the pile of the fabric;

Figure 3 is a perspective view of the clearer roll showing the textile covering applied thereto;

Figure 4 is a vertical sectional view on an enlarged scale and showing how the lay of the pile is inclined at approximately a forty-five degree angle relative to a line extending diagonally of the diameter of the roll;

Figure 5 is a longitudinal vertical sectional view, on an enlarged scale, taken substantially along the line 5—5 in Figure 3 showing the textile covering secured to the clearer roll and showing the angle at which the pile of the textile fabric lays relative to the longitudinal axis of the clearer roll.

Referring more specifically to the drawings, the numeral 10 indicates a piece of velvet, plush or velour fabric from which the textile covering material is to be cut. As is well known, this type of textile fabric is woven with a pile which normally stands straight up from the fell of the cloth, but in this case the pile of the fabric has been compressed and set to force the pile to lay downwardly at an angle in the direction of the arrow in Figure 1 to thus permanently set the pile at an inclined angle of approximately forty-five degrees. When the fabric is rubbed in the direction of the arrow in Figure 1 it is very smooth and there is no resistance whatsoever to rubbing and which action will collapse the pile so that any lint or fly thereon may be easily removed. When the fabric is rubbed in the direction opposite that in which the arrow in Figure 1 indicates, the pile is raised upwardly or bent over so that the pile forms a rough surface and as the fabric is rubbed in this direction any lint or fly on the surface will cling and can not be rubbed off.

In order to form roll covering strips from this piece of material 10 it has been found that it is best to cut the strips of a bias of the material at approximately forty-five degrees as indicated by the dotted lines 11 in Figure 1. The strips cut from the material 10 are indicated broadly at 15 and are cut wide enough to just reach around the outer periphery of the clearer roll and long enough to reach from one end to the other of the clearer roll. After these strips of velour or velvet roll covering fabric have been cut one of the strips 15 is glued onto a conventional wooden clearer roll 16 to completely cover the same.

The clearer roll 16 is provided with a pair of end trunnions 17 which have an enlarged portion 18 and a pointed inner end 19 which is driven into both ends of the wooden clearer roll 16.

Since, the pile of the fabric lays in the direction of the arrow in Figure 1 and the strips of roll covering are cut along the dotted lines at approximately a forty-five degree angle to the direction of lay or incline of the pile, it is thus seen that when the strips of fabric are placed around the wooden clearer roll 16 and glued thereto the pile lays at approximately a forty-five degree angle relative to the transverse axis of the clearer roll 16 and is also inclined at approximately a forty-five degree angle relative to the diameter of the clearer roll 16.

It is thus seen that when the clearer roll 16 with this textile fabric covering 15 is placed in contact with a roll which is turning in the opposite direction from the incline of the pile of the textile covering of the drawing roll, the clearer roll will be turned and will pick up any lint, fly or the like from the roll on the upstanding pile, since, when the fabric is rubbed against the inclined pile, it presents a rough and adherent surface.

Upon removing the clearer roll after it has picked up a sufficient amount of lint and fly to render it inefficient the operator may grasp the roll and surround the roll with one hand near the end of the roll remote from the

end towards which the pile points and with a slight twisting motion he may easily collapse the pile of the velour fabric thereon and thus easily strip all the lint and fly or waste material from one end of the roll to the other without any damage to the roll 16 or the textile fabric cover 15 thereon.

It is thus seen, that there has been provided a simple and cheaply constructed clearer roll cover for spinning frames and the like which textile covering is so applied and of such character as to insure that any loose fibers, lint and the like on the adjacent roll will be picked up by said textile material and which may be readily removed from the roll by hand without the necessity of cutting or otherwise mutilating the drawing roll or the cover thereon.

In the drawings and specification there has been set forth a preferred embodiment of the invention and although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being defined in the claim.

I claim:

A clearer roll for spinning frames and the like comprising a roller having end trunnions and a texile peripheral covering adhesively applied to said roll, said covering consisting of a pile fabric with lay to the pile thereof, said covering extending between the ends of said roller and completely enveloping the peripheral surface of said roller, the lay of the pile of said covering extending at an angle relative to the axis of said roller and also extending at an angle relative to the diameter of the roller, and the lay of the pile of said covering extending in the same direction from one end of the roller to the other.

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